



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Arthur J. Rocque, Jr.
Commissioner



March 14, 2001

Senator Donald E. Williams
Representative Jessie G. Stratton
Co-Chairpersons
Environment Committee
Room 3200
Legislative Office Building
Hartford, CT 06106

Re: *Annual Report Pursuant to Public Act No. 00-175*
An Act Concerning the Use of MTBE

Dear Co-Chairpersons Williams and Stratton:

This is a follow-up to my letter of 12/29/00 updating you on the status of the Department of Environmental Protection's (the "Department's") efforts pursuant to Public Act No. 00-175, *An Act Concerning the Use Of MTBE*. According to this act, the Department is required to submit an annual report to the Environment Committee outlining the Department's progress on a plan to eliminate methyl tertiary butyl ether ("MTBE") as a gasoline additive. As stated in my letter of 12/29/00, the Department decided to delay the submission of our annual report, to await the completion of a regional study evaluating ethanol as an alternative to MTBE. This study, conducted by the Northeast States for Coordinated Air Use Management (NESCAUM) and the New England Water Pollution Control Commission (NEIWPCC) while not yet final, contains several significant findings which warrant your attention and consideration.

The findings outlined in the NESCAUM/NEIWPCC study lead the Department to conclude that the ban on MTBE effective in the year 2003 is not prudent for the State of Connecticut and we recommend that the Environment Committee consider changing the date of the ban. If this action is not taken, Connecticut's position in the region as the first and only state to ban MTBE while required under the Clean Air Act to comply with the federal Reformulated Gasoline Program (RFG) will likely result in one of several undesirable options. These options could include: the delivery of special or non-complaint gasoline or an increase in the price of gasoline conservatively estimated in the range of 3-11 cents per gallon. If the legislature does not initiate a legislative change this session the Department is prepared to recommend changing the date in the next legislative session.

These conclusions are based on the findings highlighted in the attached summary. If there are any questions regarding the Department's activity regarding MTBE, please contact Tom Tyler, my Legislative Liaison, at 424-3001. Thank you for your consideration of this matter.

Sincerely,

— Arthur J. Rocque, Jr.
Commissioner

AJR/TRB/trb

cc: Tom Tyler, Legislative Liaison, DEP

ATTACHMENT

*Annual Report Pursuant to Public Act NO. 00-175
An Act Concerning the Use of MTBE*

The following is a synopsis of the key findings from the NESCAUM/NEIWPCC study.

Background

The federal reformulated gasoline program (RFG) was designed to reduce emissions from motor vehicles. To comply with the RFG program, gasoline must achieve a set of emission performance standards and meet a minimum oxygen content requirement. Currently, approximately three-quarters of all gasoline sold in the northeast market is RFG. Refiners have opted to sell an RFG blend containing MTBE at 11% by volume which translates into approximately 1 billion gallons of MTBE sold annually in the Northeast. The RFG program has provided substantial reductions in emissions of smog forming pollutants, benzene and other hazardous air pollutants from motor vehicles. However, substantial evidence indicates that the unique chemical and physical properties of MTBE pose an unacceptable risk to the region's potable water supply. The challenge facing policy makers is to maintain the air quality benefits of RFG while reducing the threat that MTBE poses to the region's water resources.

Cost Implications of Eliminating MTBE

MTBE and ethanol are the only two oxygenates currently produced in quantities sufficient to meet the demand created by the RFG program. Therefore, under current federal law eliminating MTBE represents a de facto mandate for ethanol. The consequences of introducing hundreds of millions of gallons of ethanol into the region's gasoline pool by 2003 will have significant economic impacts by potentially increasing the cost of gasoline in Connecticut by a range of 3-11 cents per gallon. However, the 2003 date puts Connecticut on a more accelerated phase out schedule than other states regionally or nationally and this may result in costs outside the range of the projected 3-11 cent increase per gallon. The increase in cost is the result of several key factors:

- **Fuel Reformulation Costs-** Formulation changes associated with eliminating MTBE are likely to increase the cost of gasoline production due to the need for process changes and equipment modifications as well as the inclusion of replacement blend components which are more expensive than MTBE. Critical factors in the cost effectiveness equation are the timeframe for phase in, the relative supply and demand for fuel constituents, and the longer term prospects for developing ethanol production capacity in the New England.
- **Infrastructure Costs –** Due to ethanol's unique properties, notably its affinity for water, a new infrastructure to transport millions of gallons of ethanol from the mid-west and internationally will need to be developed. The existing distribution systems have water infiltration problems that cause ethanol to separate out of gasoline. Ethanol will require different handling and transport methods than have been used for MTBE. California has estimated that it will cost approximately \$60 million and will take up to 24 months to modify storage tanks, unloading facilities and the installation of blending equipment at distribution

terminals. The NESCAUM/NEIWPCC study estimates that the cost for the Northeast would be roughly \$48 million.

- **Economic Costs** - Projections show that in 2003 approximately 1.5 billion gallons of gasoline will be sold in Connecticut. A one-cent per gallon increase translates to about \$15 million dollars of outflow from the state. Since most RFG is produced outside the region, increased gasoline prices represents a substantial outflow of economic resources from the regional economy. The NESCAUM/NEIWPCC study cites a 1999 U.S. Department of Energy report estimating that the average cost of RFG produced at east coast refineries would increase by 3.9 cents per gallon if all MTBE were replaced by 2004 under a nationwide ban on ethers. Connecticut is the only state in New England that has banned MTBE by 2003, this makes projecting potential increases in gasoline prices difficult. While difficult to predict with accuracy, unilateral action by Connecticut will result in per gallon increases in the cost of gasoline beyond those predicted for national or regional actions. The NESCAUM/NEIWPCC study clearly shows that a longer lead-time that enables a coordinated regional phase-out of MTBE would translate into cost savings on projected increases in gasoline prices.

Environmental Impacts of MTBE v. Ethanol

Gasoline spilled or leaked into the environment is a major source of water pollution, and at elevated levels, gasoline and its constituents can adversely affect drinking water quality. Both ethanol and MTBE exhibit a high solubility in water and high mobility in the subsurface. Because it biodegrades quickly in the environment, ethanol poses significantly less risk to water resources than MTBE. However, in certain instances, the environmental transport properties of ethanol can make other gasoline constituents more soluble in groundwater, and potentially inhibits the degradation of other more toxic components in gasoline such as benzene and toluene. While the potential increases in exposure from ethanol do not compare with the risks born by MTBE, it raises another issue for consideration and management.

Waiver Request

Under Section 211 (k) of the Clean Air Act states may receive a waiver from the oxygenate requirement of the RFG program. This is not to be confused with a waiver from the use of MTBE. The State of California submitted a waiver request to the U.S. Environmental Protection Agency (EPA) in 1999. At the time of this writing, EPA has yet to even propose a decision in response to California's request. While the Department intends to seek a waiver as part of a regional strategy a waiver request will not serve as a timely solution for Connecticut. In the absence of a waiver, an amendment to the federal Clean Air Act would be required to enable the state to comply with RFG requirements. Non-compliance will result in federal sanctions and the loss of millions of dollars in transportation funding. In addition, Connecticut will still need to make up the difference in the emissions shortfall that has been credited to the RFG program.

Public Education and Outreach on Effective Gasoline Management

There are opportunities for enhancing current public education and outreach efforts on the importance of a safe and effective gasoline management. Department has already initiated a public outreach effort and has met several times with representatives from petroleum marketing

and fuel additive industry groups to establish a campaign to educate the public on the proper handling of gasoline. This group plans to utilize aspects of a campaign called "Gas Care" that was launched by the Alliance for Proper Gasoline Handling in 2000. Also, the Department's efforts in enhancing compliance with the 1998 federal Underground Storage Tank regulations have served as an important measure in promoting effective gasoline management. However, while Department's efforts have resulted in over 8,500 tanks now in compliance with these requirements, there are over 5,100 non-compliant tanks remaining. This universe represents a labor intensive effort which currently is severely understaffed.